

CARDIAC RESYNCHRONIZATION THERAPY VIA MULTIPOLAR LEFT VENTRICULAR LEADS IN ELDERLY DIABETIC PATIENTS

Celestino Sardu, Giuseppe Paolisso, Maria Rosaria Rizzo, Michelangela Barbieri and Raffaele Marfella

University of Campania Luigi Vanvitelli, Italy

Background: Type 2 diabetes mellitus (T2DM) is a multi factorial disease, affecting clinical outcomes in failing heart patients treated by cardiac resynchronization therapy with a defibrillator (CRT-d).

Methods: One hundred and twenty five T2DM elderly diabetic patients received a CRT-d treatment. Randomly the study population received a CRT-d via multipolar left ventricle (LV) lead pacing (n=63, multipolar group) vs. a CRT-d via bipolar LV pacing (n=62, bipolar group). These patients were followed by clinical and instrumental assessment and telemetric device control at follow up. In this study, we evaluated cardiac deaths, all cause deaths, arrhythmic events, CRT-d responders rate, hospitalizations for HF worsening, phrenic nerve stimulation (PNS) and LV catheter dislodgment events (and re-intervention for LV catheter re-positioning) in a population of failing heart T2DM elderly patients, comparing multipolar CRT-d vs. bipolar CRT-d group of patients at follow up.

Results: At follow up there was a statistical significant difference about atrial arrhythmic events [4 (7%) vs. 10 (16.7%), p value 0.019], hospitalizations for HF worsening [9 (15.2% vs. 15 (25%), p value 0.046], LV catheter dislodgments [1 (1.6%) vs. 6 (9.7%), p value 0.018], PNS [3 (5%) vs. 12 (19.3%), p value 0.007], and LV re-positioning [1 (1.6%) vs. 6 (9.7%), p value 0.018], comparing multipolar CRT-d vs. bipolar CRT-d group of patients. Multipolar pacing was an independent predictor of all these events.

Conclusions: CRT-d pacing via multipolar LV lead vs. bipolar LV lead may reduce arrhythmic burden, hospitalization rate, PNS, LV catheters dislodgments and re-interventions in T2DM elderly failing heart patients.

drsarducele@gmail.com
celestino.sardu@unicampania.it